SIGNAL DEMODULATION IN A MOBILE RECEIVER

Abstract

A WCDMA receiver in which the dependencies of different functional modules are arranged to allow proper tailoring of the Channel Estimation (CE) module bandwidth. A PreCE provides rough estimation results of the channel complex gain. The rough estimation results are passed to the Automatic Frequency Control (AFC). The AFC outputs a signal transmitted to two mixers. The first mixer mixes the output of the PreCe with the output of the AFC and outputs the result to a Velocity estimator (VE) and a PostCE to generate the compensating signals. The output of the VE is also transmitted to the PostCE. The output of the PostCE is sent to a Maximum Ratio Combining module, whose output is mixed by the second mixer with the output of the AFC to generate a final signal.